

We Claim:

1. A method of ablating and/or coagulating tissue, comprising the steps of:

5 (a) providing an ablation device including an electrode array carried by an elongate tubular member, the electrode array including a fluid permeable elastic member having insulating regions and conductive regions thereon;

10 (b) positioning the electrode array in contact with tissue to be ablated;

(c) delivering RF energy through the array to the tissue to cause the tissue to dehydrate, and

(d) permitting moisture generated during the dehydration of step (c) to pass into the electrode carrying member and away from the tissue.

15 2. The method of claim 1 wherein the fluid permeable elastic member includes metallized fabric.

3. The method of claim 1 wherein the array is expandable and wherein step (b) further includes the step of moving the array to an expanded condition.

20 4. The method of claim 3 wherein the array is carried by a pair of elongate flexures and wherein the step of moving the array to the expanded condition includes the step of expanding the flexures.

PATENT APPLICATION

Express Mailing Label: EM503277278US

- 44 -

Sub C17

5. The method of claim 4 wherein each flexure includes at least one opening and wherein step (d) includes allowing at least a portion of the moisture to pass through the openings in the flexures.

5 6. The method of claim 1 wherein step (d) includes permitting at least a portion of the moisture to pass from the array into the tubular member.

7. The method of claim 3 wherein step (d) includes the step of applying suction to draw the moisture through the tubular member.

10 8. The method of claim 1 wherein the method further includes the step of
(e) monitoring impedance using the electrode array and automatically terminating the flow of current into the tissue once impedance has approximately reached a predetermined level.

15 9. The method of claim 1 wherein the method further includes the step of measuring the approximate length and width of the organ and wherein step (c) includes the steps of selecting an ablation power corresponding to the measured length and width and delivering the RF energy to the tissue at approximately the selected
20 power.

10 10. The method of claim 9 wherein the array is carried by a pair of elongate flexures and wherein the step of measuring the

PATENT APPLICATION

Express Mailing Label: EM503277278US

- 45 -

approximate width of the organ includes the step of expanding the flexures to an expanded condition and deriving the approximate width of the uterus from the relative positions of the flexures in the expanded condition.

5 11. The method of claim 9 wherein step (c) further includes selecting an ablation power which is proportional to the measured length times the measured width.

12. The method of claim 2 wherein the metallized fabric includes yarns of elastic material and yarns of inelastic material.

10 13. The method of claim 12 wherein the metallized fabric includes yarns of spandex and nylon.

15 14. The method of claim 2 wherein the array material has elasticity in a transverse direction and in a longitudinal direction and wherein the elasticity in the transverse direction is greater than the elasticity in the longitudinal direction.

Pub 02 15. The method of claim 1 including the step of applying suction through the tubular member to draw the tissue into contact with the electrode array.

20 16. An ablation and/or coagulation apparatus for use in delivering energy to tissue for ablation, the apparatus comprising:

PATENT APPLICATION

Express Mailing Label: EM503277278US

- 46 -

an electrode array carried by an elongate member, the array including a fluid permeable elastic member having insulating and conductive regions thereon, the electrode array configured to permit moisture generated during ablation to pass actively and/or passively into the electrode array and away from underlying tissue;

a source of radio frequency energy electrically coupled to the conductive regions of the array.

10 *Sub A3* 17. The ablation and/or coagulation apparatus of claim 16 further including an elongate tube having at least one opening adjacent to the array and a vacuum source fluidly coupled to the elongate tube.

18. The apparatus of claim 16 wherein the fluid permeable elastic member includes metallized fabric.

19. The apparatus of claim 18 wherein the metallized fabric includes yarns of elastic material and yarns of inelastic material.

15 20. The apparatus of claim 18 wherein the metallized fabric includes yarns of spandex and nylon.

20 21. The apparatus of claim 16 wherein the array has elasticity in a transverse direction and in a longitudinal direction and wherein the elasticity in the transverse direction is greater than the elasticity in the longitudinal direction.

PATENT APPLICATION

Express Mailing Label: EM503277278US

- 47 -

22. The apparatus of claim 16 wherein the electrode array is carried by a deflecting mechanism moveable between a retracted position and an expanded position.

23. The apparatus of claim 22 wherein the deflecting mechanism includes a pair of elongate flexures.

24. The apparatus of claim 23 wherein the flexures include at least one fluid opening.

25. The apparatus of claim 22 wherein the deflecting mechanism includes electrically conductive regions electrically coupled to conductive regions of the electrode array.

26. The apparatus of claim 23 wherein the flexures include electrically conductive regions electrically coupled to conductive regions of the electrode array.

27. The apparatus of claim 16 further comprising:
width measurement means for measuring the approximate width of the organ.

28. The apparatus of claim 27 further comprising:
length measurement means for measuring the approximate length of the organ.

PATENT APPLICATION

Expr ss Mailing Label: EM503277278US

- 48 -

29. The apparatus of claim 27 further comprising means for determining an ablation power using the measured approximate width.

5 30. The apparatus of claim 28 further comprising means for determining an ablation power using the measured approximate width and length.

31. An ablation and/or coagulation apparatus for use in delivering energy to tissue for ablation, the apparatus comprising:

an elongate member;

10 a deployment mechanism carried by the elongate member, the deployment mechanism moveable between a retracted position and a plurality of laterally expanded positions;

an electrode array carried by the deployment mechanism;

a sheath slidably disposed over the electrode array;

15 a handle coupled to the sheath and deployment mechanism, the handle moveable between an insertion position in which the sheath is disposed over the electrode array and the array is in an unexpanded condition, and a deployment position in which the electrode array extends from the distal end of the sheath and is in
20 one of its expanded positions;

limiting means for selectively limiting lateral expansion of the deployment mechanism and for selectively limiting longitudinal extension of the array from the sheath; and

25 a source of radio frequency energy electrically coupled to the array.

Docket No. ENV5-220